

Friday, April 21, 2017 11:48:02 AM

Page 1

25

DAS
38
9-89

MAY 15 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 160128

Friday, April 21, 2017 11:48:02 AM

160128

Page 2

Item ID: D2535 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Spring
Start Date: 4/24/2017 Start Qty: 25.00 ***25*** Cust Item ID:
Required Date: 5/8/2017 Req'd Qty: 25.00 ***25*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>Stock</u>	0.00							
130									
Packaging	Memo	0.25			25		MAY 16 2017		DAS 6 9-89
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	2.50							
Quality Control									

17/5/16 
MAY 16 2017
DAS
21
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Friday, April 21, 2017 11:48:05 AM

Page 1

Work Order ID: 160128

160128

Parent Item: D2535

D2535

Parent Item Name: Spring

Start Date: 4/24/2017

Required Date: 5/8/2017

Start Qty: 25.00

Required Qty: 25.00

Comments: IPP A99.04.19New Issue (From hand written IPP)DM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2535P

Purchased

No

100

Each

0.0000

1

25

D2535P

Spring

25x8017-515

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

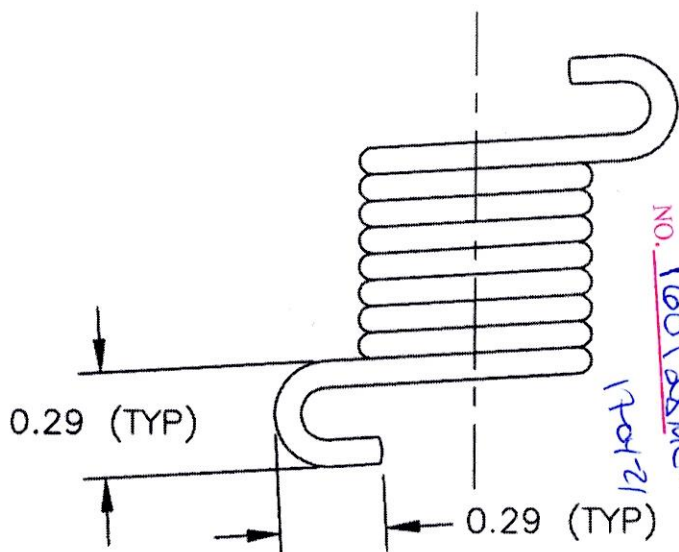
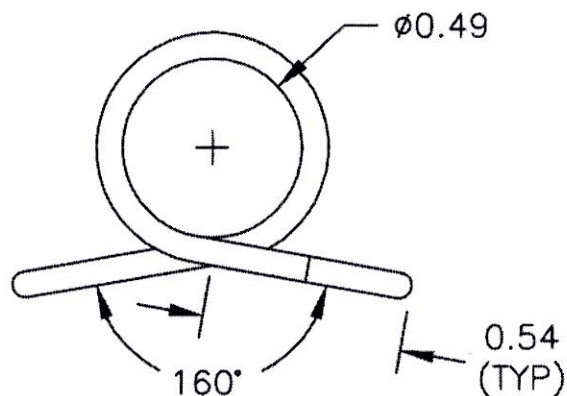
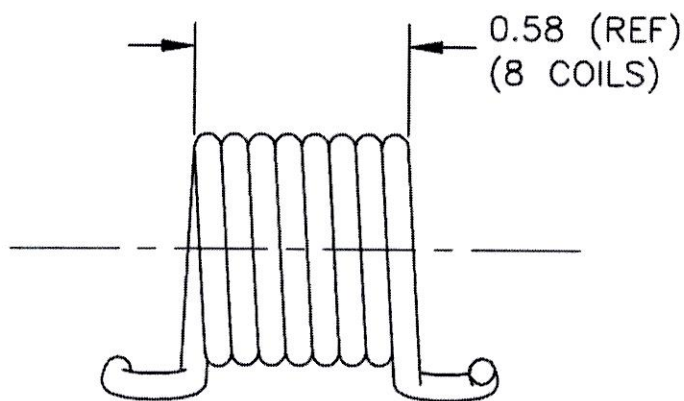
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



DESIGN BW	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED KE	APPROVED JH	DRAWING NO. D2535	REV. A SHEET 1 OF 1
DATE 99.04.08	TITLE SPRING SPEC CONTROL		SCALE 2:1
A	99.04.08	NEW ISSUE	

RELEASED
99.05.11 KE



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 160128145

SPECIFICATION CONTROL DRAWING

TENSION SPRING WITH 8 COILS (NO GAP BETWEEN COILS)

MATERIAL: AISI STAINLESS STEEL $\phi 0.070$

POSSIBLE SUPPLIERS: VICTORIA SPRINGS, P/N .070SS TENSION SPRING

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36136**

Purchase Order Date 4/28/2017 1:11:17 PM

PO Print Date 4/28/2017

Page Number 1 of 2

Order From :
VICTORY SPRING LTD.
#2 6104 - 82 AVE.
EDMONTON, AB T6B 0E7
CA

VC-VIC002

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

APR 28 2017

Contact Name
Vendor Phone 866 230 5312

Ship To Contact
Ship To Phone
Ship Via: FedEx Overnight collect
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D2535P AS PER DWG D2535 REV. A B160128 DAS 38 4-89	Spring	5/10/2017 Yes 5/10/2017		25.00 Each	\$4.74	\$118.50
Line Total:							\$118.50
3	71401-45 Procurement Quality Clauses A005 RIGHT OF ENTRY A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER) A016 PERSONNEL QUALIFICATION A026 CERTIFICATION OF MATERIAL CONFORMANCE A040 NOTIFICATION OF QUALITY ESCAPE A042 DART NOTIFICATION BY SUPPLIER A043 RETENTION OF QUALITY DOCUMENTS	PROCUREMENT QUALITY CLAUSES	5/10/2017 No 5/10/2017		1.00	\$0.00	\$0.00

8217 5-15

Note:

4/28/2017



#2, 6104 - 82 Ave
Edmonton, AB T6B 0E7
t + 780 442 4020
e + accounts@victoryspring.ca

PACKING SLIP

Packing Slip: 37808
Date: May 10, 2017
Order Ref: PO36136

Sold to:

Dart Aerospace Ltd
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7

Ship to:

Dart Aerospace Ltd
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7

Shipped By: FedEx Overnight

Shipped Quantity	Backorder Quantity	Unit	Item No.	Description	Price
25		Each	VIC 1533	D2535P Spring - Torsion	4.74
Comment:					

80175-15

DAS
38
-88

MATERIAL CERTIFICATION

REPORT FOR: Dart Aerospace Ltd.	DATE: 5/10/2017
PART/DRAWING #: VIC 1533 / D2535P	PO # PO36136
SPRING DESCRIPTION: Torsion Spring	QUANTITY: 25
MATERIAL GRADE: T302 Stainless Steel Wire Spring ASTM-313-03	
PROPERTIES:	
<u>Chemical</u>	<u>Physical</u>
Carbon: (C) 0.065	Size: 0.072"
Chromium: (Cr) 18.050	
Copper: (Cu) 0.420	Tensile PSI: 268,300 / 275,000
Manganese: (Mn) 1.190	
Molybdenum: (Mo) 0.330	
Nickel: (Ni) 8.020	
Phosphorus: (P) 0.029	Heat # KNAX00924
Silicon: (Si) 0.320	
Sulphur: (S) 0.001	
Mill Source: Gibbs Wire	

Certified by: Jeremy Burrowes - QA

Victory Spring Ltd. certifies this to be a true & accurate copy of the original contained in the company records.

CERTIFICATE OF CONFORMANCE

REPORT FOR : Dart Aerospace Ltd.	DATE: 5/10/2017
PART/DRAWING #: D2535P / VIC 1533	PO # PO36136
DESCR: Torsion Spring	QUANTITY: 25

CHARACTERISTIC	SPECIFIED	MEASURED	NOTES
Material type	SS302	yes	
Material diameter	0.07	0.072	
Coil I.D.	0.490	.489"	
Coil O.D.		.634"	
Number of Coils	8 ref	7.9	
Overall Length		1.109	
End Type	per dwg	yes	
Helix	RHW	RHW	

COMMENTS

Mill Certificate attached: Yes
Material Heat Number: KNAX00924

Inspected by: *Jeremy Burnowes*